

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Row 44, Inc.	)	File No. SES-STA-20090417-00507
	)	
Application for Special Temporary Authority	)	
for operation of aircraft earth stations	)	

**ORDER AND AUTHORIZATION**

**Adopted:** May 15, 2009

**Released:** May 15, 2009

By the Chief, Satellite Division, International Bureau:

1. In this order, we grant a request by Row 44, Inc. (Row 44) for Special Temporary Authority ("STA") to operate up to twelve Aeronautical Mobile Satellite Service aircraft earth stations for testing, including in-flight testing, for an additional period of sixty days, commencing May 15, 2009, subject to conditions specified below.

2. In a license application<sup>1</sup> filed in May 2008, Row 44 requested blanket operating authority for up to one thousand aircraft earth stations that would transmit in the 14.05-14.47 GHz band and receive in the 11.7-12.2 GHz band. The terminals would provide broadband communications for passengers and flight crew via radio links to leased transponders on three geostationary satellites: Horizon 1 at 127° West Longitude operated by Intelsat LLC, AMC-2 at 101° W.L. operated by SES Americom, Inc., and AMC-9 at 83° W.L., also operated by SES Americom.

3. Row 44 subsequently applied for a 60-day STA for test operation of twelve aircraft earth stations on commercial aircraft operated by Alaska Airlines and Southwest Airlines and a private aircraft operated by Row 44.<sup>2</sup> The test stations were to operate with the technical parameters specified in the underlying blanket license application and link with the same target satellites. In support of the STA request, Row 44 filed a copy of an agreement with the licensed operators of Ku-band satellites near the specified target satellites.<sup>3</sup> In the agreement, Row 44 promised to share information with potentially affected operators concerning the operational details and results of the tests.

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<sup>1</sup> SES-LIC-20080508-00570. That application will be addressed in a future order.

<sup>2</sup> IBFS No. SES-STA-20080711-00928, filed July 11, 2008.

<sup>3</sup> Attachment A to letter dated Feb. 6, 2009 from David S. Keir, Counsel to Row 44, Inc., to Marlene H. Dortch, FCC Secretary, filed in SES-STA-20080711-00928. In the context of the blanket license proceeding, Row 44 filed letters from the same satellite operators (Intelsat, SES Americom, and Echostar) supporting the STA request. See letters submitted with SES-AMD-20090115-00041, filed Jan. 15, 2009. Intelsat is the licensed operator of Galaxy 28, at 89° W.L., which is within six degrees of SES Americom's AMC-9. Intelsat also operates Galaxy 3C at 95° W.L., Galaxy 19 at 97° W.L., and Galaxy 16 at 99° W.L., which are within six degrees of SES Americom's AMC-2 satellite. SES Americom is the licensed operator of AMC-21 at 125° W.L., which is within six degrees of Intelsat's Horizon 1 satellite. Echostar is the licensed operator of Echostar 9 at 121° W.L., which is also within six degrees of Horizon 1.

4. ViaSat, Inc. (ViaSat) objected to the July 11, 2008 mobility-testing STA request.<sup>4</sup> We granted the request subject to several conditions, including requirements that Row 44 submit a report on previous ground-based testing within 30 days and a report on mobility testing within 90 days.<sup>5</sup> Row 44 submitted the ground-based test report on April 13, 2009 and the mobility test report on May 11, 2009.<sup>6</sup>

5. On April 17, 2009, Row 44 filed the above-captioned request for extension of the mobility-testing STA for an additional 60-day period. Row 44 maintains that granting the requested extension will serve the public interest by enabling Row 44 and the cooperating airline companies to continue gathering useful performance and operations data under a variety of circumstances. Row 44 also requests that we modify the STA by eliminating a condition barring operation while a testbed aircraft is on the ground or within 55 meters of the ground unless protocols are in place to ensure that no one is exposed to radiofrequency energy in excess of the maximum permissible limits. Row 44 contends that this condition has been rendered unnecessary by an amendment to the Radiation Hazard Study in the underlying blanket license application.<sup>7</sup> In a supplemental filing, Row 44 submitted letters from Intelsat, SES Americom, and Echostar stating that they have no objection to granting extensions of the mobility-test STA.<sup>8</sup>

6. ViaSat opposes Row 44's STA extension request.<sup>9</sup> ViaSat argues that Row 44 has had ample time to conduct in-flight testing and that no further authority should be granted for in-flight testing before the Commission and interested parties have had an opportunity to review data from the in-flight testing conducted pursuant to the STA granted on March 13, 2009. ViaSat also argues that operation for purposes of market research is beyond the scope of the authority granted previously and cannot justify an extension.

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<sup>4</sup> Letter dated Feb. 9, 2009 from John P. Janka and Jarrett S. Taubman, Counsel for ViaSat, Inc., to John Giusti, Acting Chief, International Bureau, filed in SES-STA-20080711-00928.

<sup>5</sup> *Row 44 Inc., Application for Special Temporary Authority for Mobility Testing of Aircraft Earth Stations, Order and Authorization*, DA 09-585 (Int'l Bur., Sat. Div., released Mar. 13, 2009).

<sup>6</sup> Row 44 requested that the reports be withheld from public inspection. See letters dated Apr. 13 and May 11, 2009 to Robert G. Nelson, Chief, Satellite Division, from David S. Keir, filed in SES-LIC-20080508-00570 and SES-STA-20080711-00928. ViaSat filed a request for inspection of the ground-test report pursuant to the Freedom of Information Act. (FOIA Control No. 2009-346, filed Apr. 17, 2009). Row 44 subsequently informed the Commission's Satellite Division that it had reached agreement with ViaSat on the terms of a protective order concerning disclosure of the ground-test report. Letter dated Apr. 23, 2009 to Stephen Duall, Chief Policy Branch, Satellite Division, from David S. Keir, Counsel to Row 44. On May 13, 2009, the International Bureau ordered Row 44 to disclose the report in accordance with the negotiated protective order. *Row 44, Inc., Application for Authority to Operate up to 1,000 Technically-Identical Aeronautical-Mobile Satellite Service Earth Stations in the 14.05-14.47 GHz (Transmit) and 11.7-12.2 (Receive) Frequency Bands, Application for Special Temporary Authority for Mobility Testing of Aircraft Earth Stations, Order to Disclose Pursuant to Protective Order*, DA 09-1062 (Int'l Bur., released May 13, 2009). Row 44 sent copies of both reports to ViaSat counsel on May 14, 2009. Letter dated May 14, 2009 to Jarrett Taubman from David S. Keir, counsel to Row 44, Inc., filed in SES-STA-20090417-00507 and STA-20080711-00928.

<sup>7</sup> See File No. SES-AMD-20090416-00501.

<sup>8</sup> Letter with attachments, dated May 8, 2009, to Stephen Duall, Chief, Policy Branch, Satellite Division, from David S. Keir, Counsel to Row 44 (*May 8 Letter*).

<sup>9</sup> Letter dated May 7, 2009 to Marlene H. Dortch, FCC Secretary, from John P. Janka and Jarrett S. Taubman, Counsel for ViaSat.

7. We conclude that granting a further 60-day STA for in-flight test operation will serve the public interest by enabling continued gathering of useful performance and operational data under a variety of circumstances. We note that the operators of Ku-band satellites within six longitudinal degrees of Row 44's target satellites have declared that they have no objection to the STA extension request.<sup>10</sup> As before, there is no indication that ViaSat's current operations could suffer interference from the proposed test operation. We also conclude in response to Row 44's request that a revised condition concerning radiation hazard is appropriate.

8. Accordingly, IT IS ORDERED that the application of Row 44 for Special Temporary Authority for mobile operation of up to twelve Aeronautical Mobile Satellite Service aircraft earth stations for testing, including in-flight testing, IS GRANTED for another period of sixty days, subject to the following conditions:

(a) Aircraft earth stations shall not be operated while the aircraft is on the ground unless appropriate safety protocols are in place to ensure that persons having access to areas within 14 meters of the antenna are not exposed to radiofrequency energy in excess of the maximum permissible limits specified in 47 C.F.R. § 1.1310. The exterior surface of the aircraft earth-station antenna shall be prominently marked with a sign warning of the potential for exposure to high levels of radiofrequency energy.

(b) Row 44 shall not cause harmful interference to, and shall not claim protection from, any other lawfully operating station. In the event harmful interference results from operation pursuant to this authorization, Row 44 shall cease operations immediately upon notification of such interference, and shall immediately inform the Federal Communications Commission, in writing, of the incident.

(c) Operation pursuant to this authorization shall be in compliance with the terms of Row 44's coordination agreements with the National Science Foundation and the National Aeronautics and Space Administration pertaining to operation of aircraft earth stations in the Ku-Band.

9. This Order is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Robert G. Nelson  
Chief, Satellite Division  
International Bureau

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<sup>10</sup> See May 8 Letter.